

English Translation of the German-language

amended claims in PCT/EP98/06694

New Claims

1. A method for producing a catalytic converter, especially for motor vehicles, for which a monolith packet (17), consisting of at least one monolith (1) around which a positioning mat (7) is wrapped, is pressed into a tube section (2) serving as housing, wherein the monolith (17) has several inside cross-sectional surfaces of different size, the monolith packet (17) is pressed in from a tube end (21) with a larger or the largest inside cross-sectional surface,

characterized by

the use of a tube section (2) with an inside cross-sectional surface that changes in stages, in the form of several longitudinal sections (9, 10), wherein the inside surface (5a) of the longitudinal sections extends essentially parallel to the central longitudinal axis (32) of the tube section.

2. A method according to claim 1,

characterized in that

a monolith packet is pressed in from each tube end of the tube section (2).

3. A method according to claim 1,

characterized by

the use of a tube section (2) where successive longitudinal sections (10c, 9d, 9e) are arranged in pressing-in direction (18), according to the decrease in the inside cross-sectional surface.

- A 4. A method according to claim 1 ~~or 2~~,

characterized by

the use of a tube section (2), for which respectively one longitudinal sections (10a, 10b) with the highest cross-sectional surface extends from each tube end, wherein these longitudinal sections (10a, 10b) between them enclose at least one longitudinal section (9c) with smaller inside cross-sectional surface.

5. A method according to ^{claim 1} ~~one of the claims 1-4~~,

characterized by

the use of a tube section (2) where the narrowed longitudinal sections extend only over a partial peripheral region.

- A 6. A method according to ^{claim 1} ~~one of the claims 1-5~~,

characterized by

the use of a tube section (2) where the narrowing of a specific longitudinal section is more pronounced in one peripheral region than in another peripheral region.

- 8 7. A method according to ^{claim 1} ~~one of the claims 1-6~~,

characterized in that

the inside cross-sectional surface of the narrowed longitudinal sections is selected such that a reduction in the radial force of pressure exerted on the monolith, which is caused by housing tolerances, monolith tolerances and/or mat tolerances, is at least compensated.

- 8 8. A method according to ^{claim 1} ~~one of the claims 1-7~~,

characterized in that

a mineral fiber mat with embedded exfoliated mica particles is used as positioning mat.

- 8 9. A catalytic converter, especially for motor vehicles, for use with a method according to ^{claim 1} ~~one of the claims 1 to 8~~, comprising
- a housing (4) that essentially consists of an approximately cylindrical tube section (2), an inflow funnel (3) and an outflow funnel (3b),
 - at least one cylindrical monolith (1) that is arranged in the tube section (2) and
 - a gap space (6) that exists between the peripheral surface (15) of monolith (1) and the inside surface (5) of housing (4) and holds a positioning mat (7) with radial pre-stressing,

characterized in that

the tube section has an inside cross-sectional surface that changes in stages, in the form of several longitudinal sections (9, 10), wherein the inside surface (5a) of the longitudinal sections (9, 10) extends essentially parallel to the central longitudinal axis (32) of the tube section.

10. A catalytic converter according to claim 9,

characterized in that

a narrowed longitudinal section (9) encircles the frontal region of monolith (1) that points toward the inflow funnel (3).

11. A catalytic converter according to claim 10,

characterized by

several monoliths (1a, 1b), wherein in each case the frontal region of the monoliths (1a, 1b) that faces the inflow funnel (3) is surrounded by a narrowed longitudinal section (9a, 9b) of housing (4).

- A* 12. A catalytic converter according to ^{claim 9} ~~one of the claims 9 - 11~~,

characterized by

a tube section (2) for which successive longitudinal sections (10c, 9d, 9e) in pressing in direction (18) are arranged according to the decrease in the inside cross-sectional surface.

claim 9

- A 13. A catalytic converter according to ~~one of the claims 9-11~~,
A
characterized by

a tube section (2), having separate longitudinal sections (10a, 10b) with the largest inside cross-sectional surfaces that extend away from the tube ends (21, 23), wherein these longitudinal sections (10a, 10b) enclose between them at least one longitudinal section (9c) with smaller inside cross-sectional surface.

claim 9

- A 14. A method according to ~~one of the claims 9-13~~,
K
characterized in that

the narrowed longitudinal sections extend only over a partial peripheral region of tube section (2).

claim 9

- A 15. A catalytic converter according to ~~one of the claims 9-14~~,
K
characterized in that

the narrowing of at least one narrowed longitudinal section is more pronounced in one partial peripheral region than in another partial peripheral region.

claim 9

- A 16. A catalytic converter according to ~~one of the claims 9-15~~,
K
characterized in that

the positioning mat (7) is a mineral fiber mat.

Claim of

17. A catalytic converter according to ^{claim 9} ~~one of the claims 9 - 16~~,

characterized in that

the positioning mat is a mineral fiber mat with embedded exfoliated mica particles.